Sustainable Water Management Initiative

Technical Subcommittee

Presentation Title: Stream Categorization: Describing the Current Condition

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Division of Fish and Wildlife

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This presentation is not to be cited as a reference. It's purpose is to foster open and broad discussion of the issues as well as help assure public awareness of the discussions as of the date of the presentation.

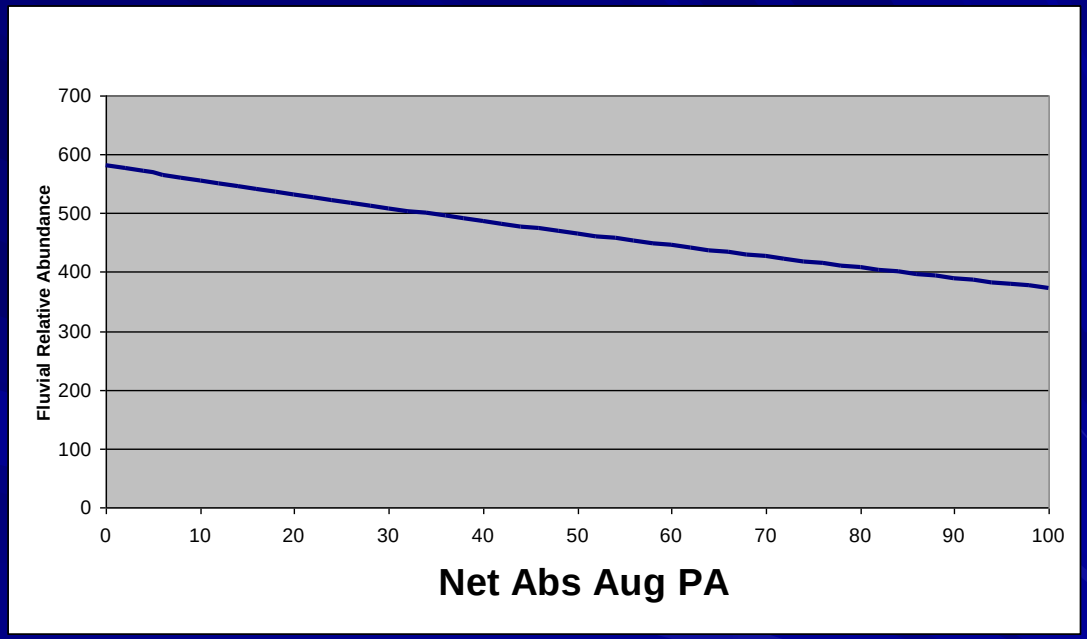
Stream Categorization: Describing the Current Condition

Categorization

- Statewide Screening Tool
- Describe the Current Condition
- Using Best Available Science
- Living Document
- Useful Tool for Discussion of:
  - Goal Setting
  - Streamflow Criteria
  - Safe Yield

Foundation: USGS Study
Fluvial Fish Relative Abundance Model

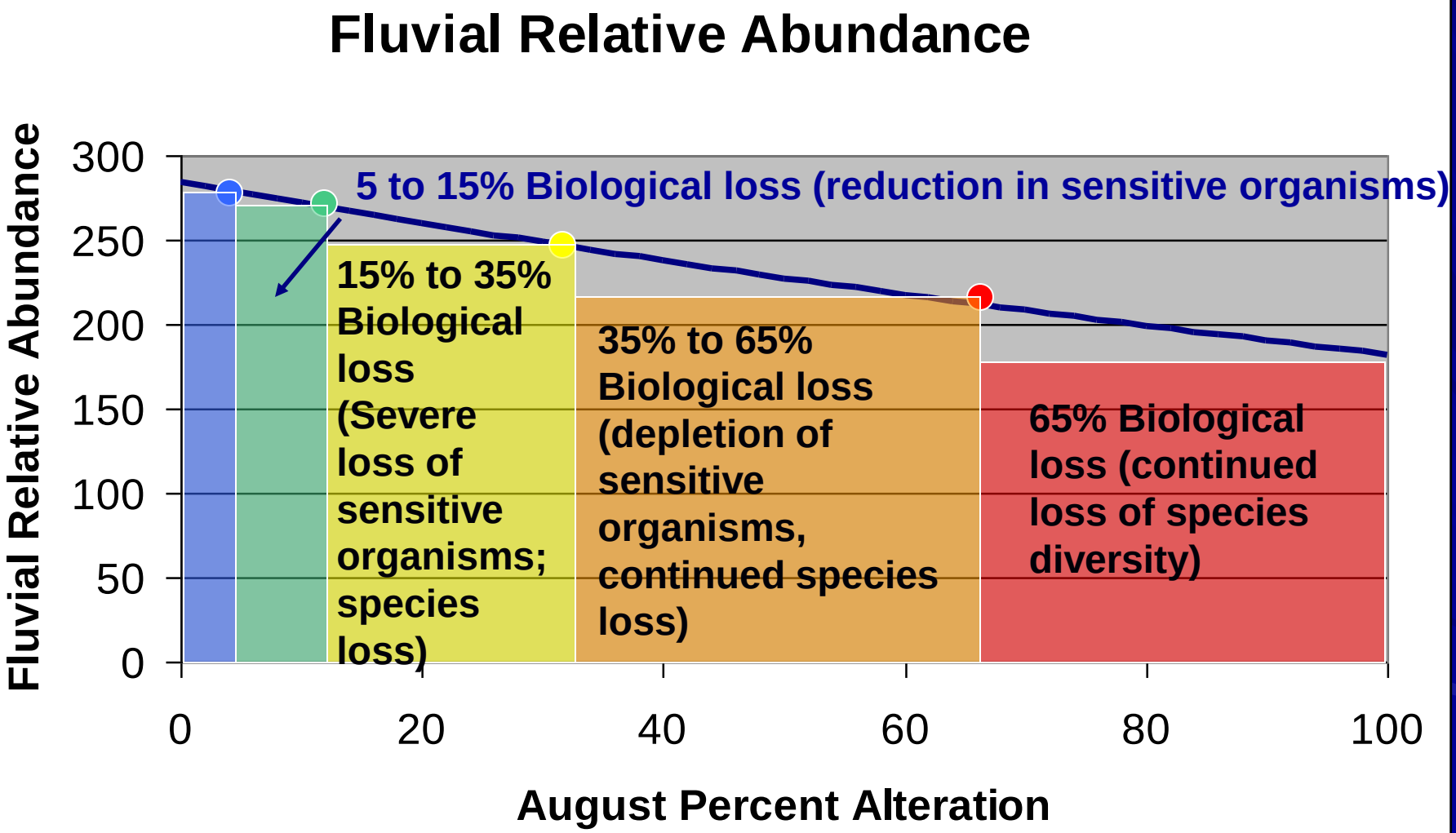
- Highly significant variables
- Best Model that Included
  - **Natural Basin Characteristics**
  - **Flow Alteration**
  - **Impervious Cover**

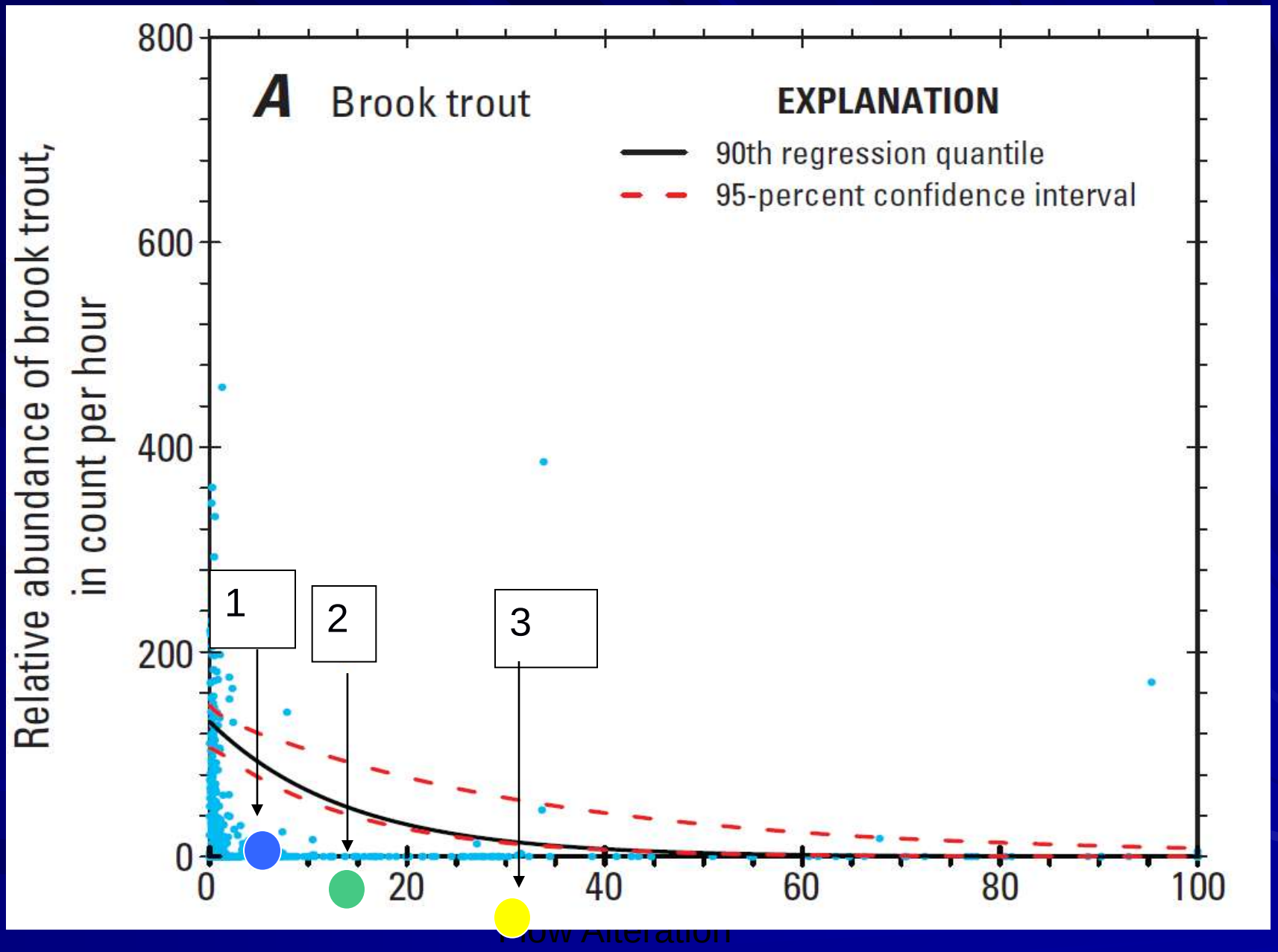


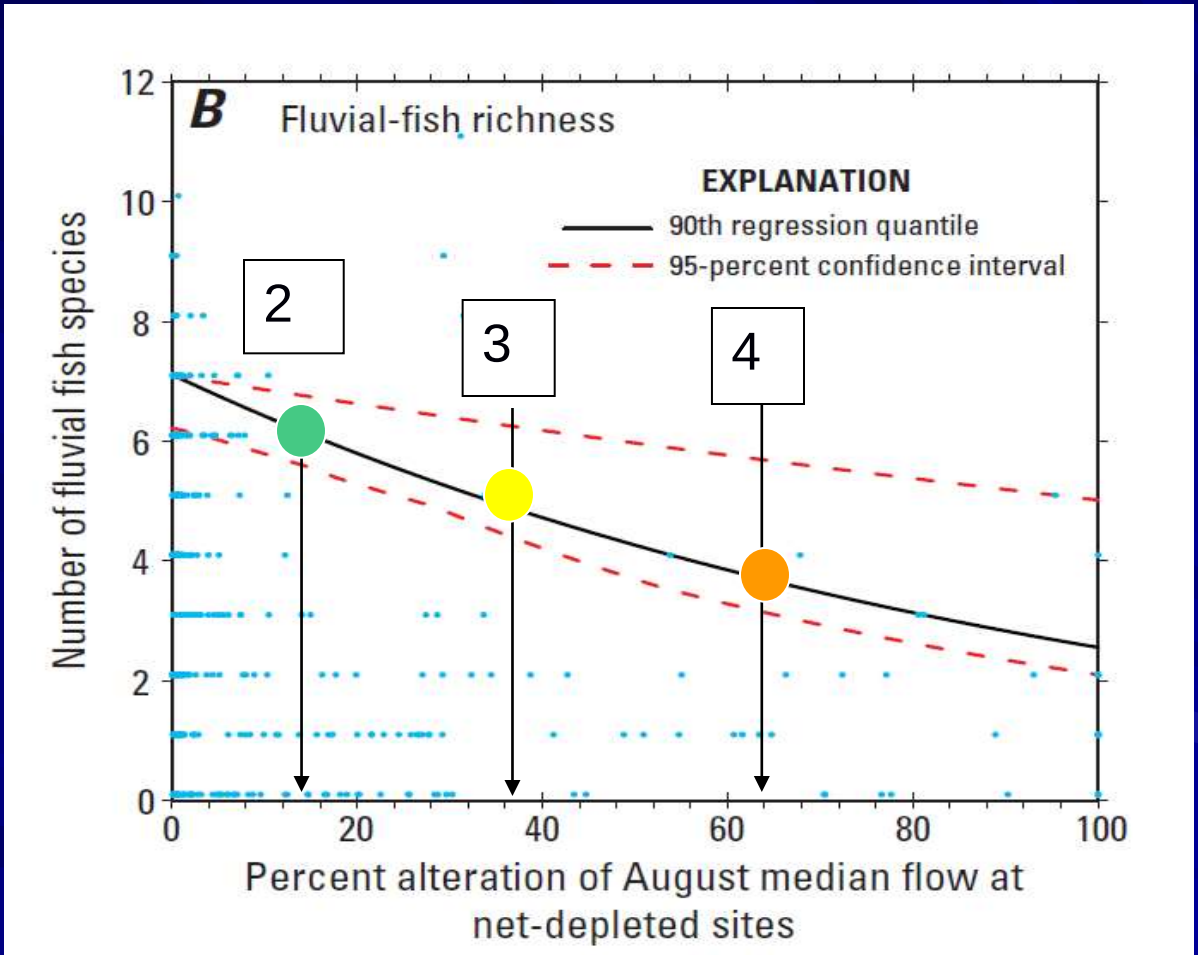
Categories

- Categories are Narrow at low end of alteration – High quality resources have sensitive populations that respond more extensively to alteration
  - TITAN Analysis
  - Quantile Regression
- Categories are Broad at high end of alteration – Communities of more tolerant individuals remain, providing less change per unit alteration
  - GLM equation
  - Biological Conditions Gradient

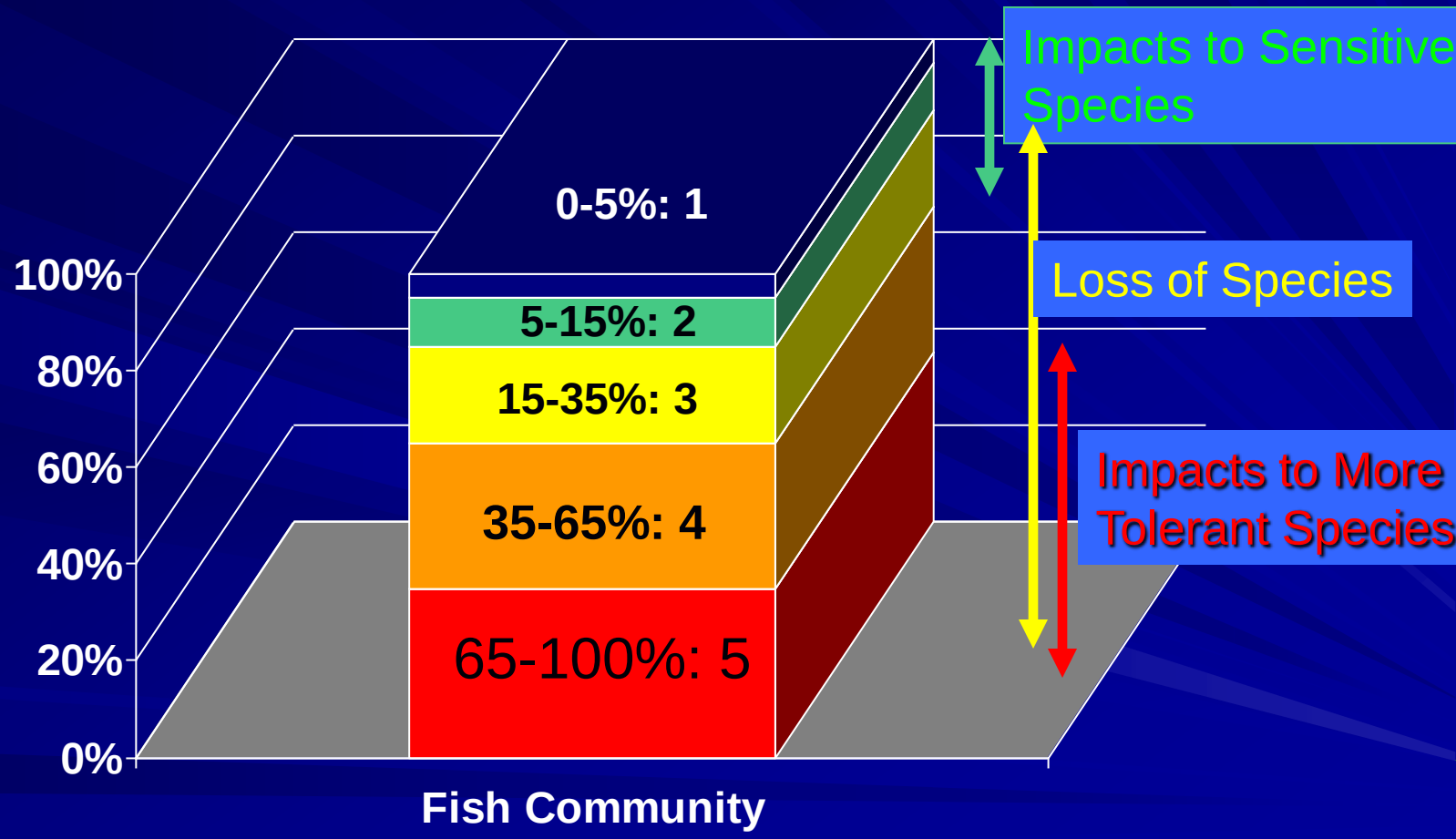
Baseline Condition



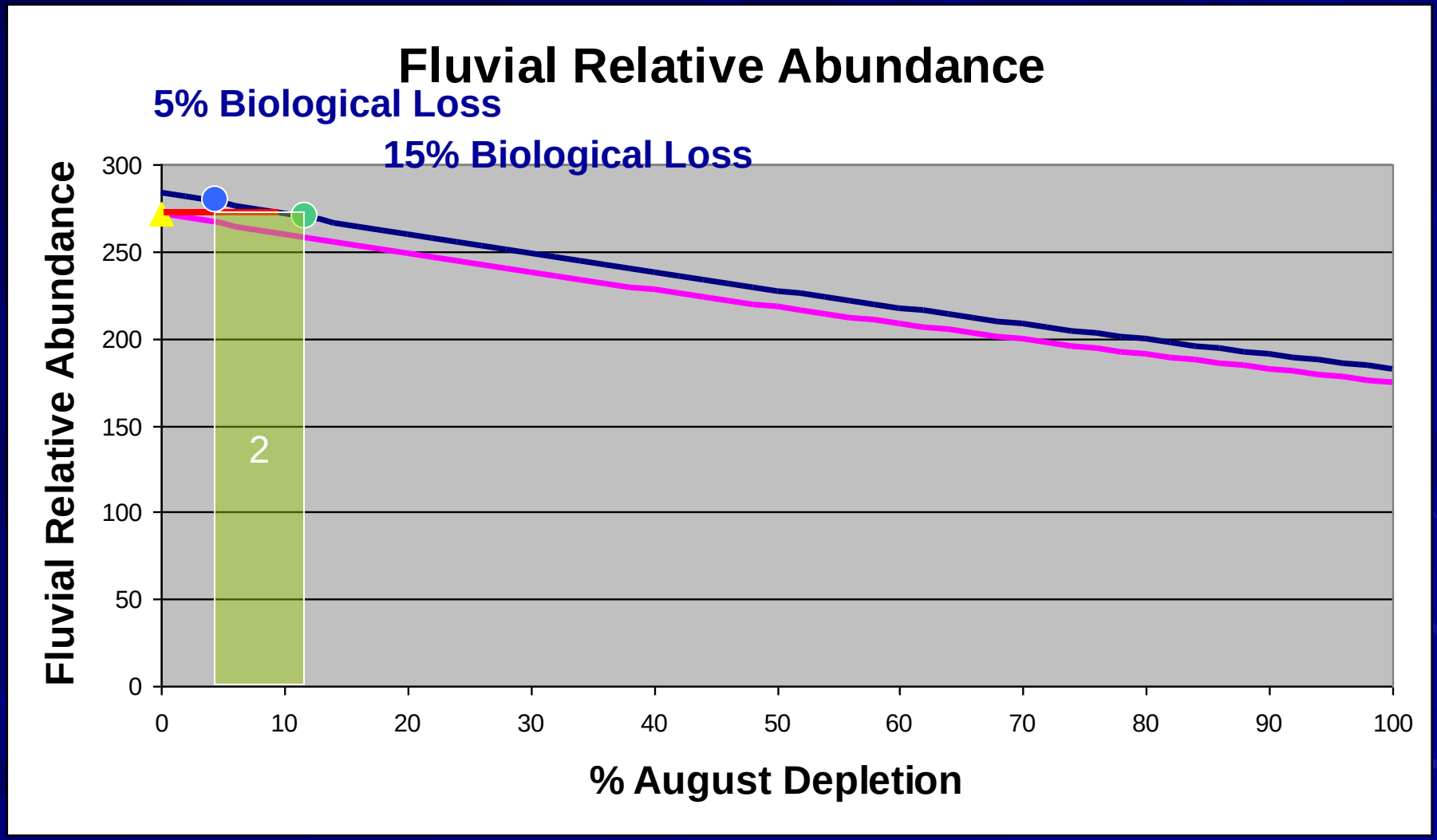

A Brook trout
EXPLANATION
90th regression quantile
95-percent confidence interval
Relative abundance of brook trout, in count per hour
800
600
400
200
0
0
20
40
60
80
100
1
2
3



Fish Community Response



Example Basin 11031



Total % Biological Alteration = 13% (Category 2)
Alteration Due to IC = 12%
Alteration Due to August Alteration = 1%

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